

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/544,878 04/07/00 KRYSIAK

M P/23-5-CIP

EXAMINER

PM82/1022

PHILIP M WEISS  
WEISS & WEISS  
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VALENTI, A

ART UNIT

PAPER NUMBER

5

3643

DATE MAILED:

10/22/01

**Please find below and/or attached an Office communication concerning this application or proceeding.****Commissioner of Patents and Trademarks**

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/544,878	KRYSIAK ET AL.
	Examiner Andrea M. Valenti	Art Unit 3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 11 September 2001.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-18 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-18 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

PETER M. POON  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600

pmp

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	6) <input type="checkbox"/> Other: _____

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,250,660 to Kitamura et al.

Regarding Claims 1, 2, 3, and 18, Kitamura et al discloses a method of encapsulating seed by an agglomeration operation using agitating and tumbling to wrap seeds with layers of fine particles and prior to agitation and tumbling the seed is sprayed with a binding agent. The agitating and tumbling overcomes the natural tendencies of the material fines to bind to one another. (Kitamura Col. 1 lines 30-40 and Claim 1)

Regarding Claim 17, Kitamura teaches that a fluidized bed is the apparatus used in the method (Kitamura Col. 2 line 17).

Claims 1-3, 6, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,465,017 to Simmons.

Regarding claims 1, 2, 3, 6, and 18, Simmons discloses a method of wrapping a nucleus/seed in a layer of fine particles by agitating and tumbling that seeds with a material fine in an agglomeration apparatus and that the apparatus that overcomes the

natural tendency of the material fines to bind to one another is a rotary drum agglomerator (Simmons abstract, Col. 6 lines 30-36, Fig. 1 element #11). Simmons discloses that prior to agitation and tumbling the seed is sprayed with a binding agent (Simmons abstract).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 6, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,250,660 to Kitamura et al in view of U.S. Patent No. 5,126,203 to Ritzer et al.

Regarding Claims 4, 6, and 9, Kitamura is silent on the pan pelletizer, a flow-jet mexer, or a rotary drum agglomerator. However, Ritzer teaches a mixer agglomeration method with binder agent using a pan pelletizer, a rotary drum agglomerator, or a flow-jet mixer (Ritzer et al Col. 2 line 4-7). It would have been obvious to one of ordinary skill in the art to modify the agglomeration method of Kitamura et al with the apparatuses of Ritzer et al, since the applicant does not present a criticality for a particular device in the specification and these are alternate equivalent apparatuses that perform the same intended function. These agglomeration apparatuses are well known in the art and one skilled in the art would select a pan pelletizer, a rotary drum, or a flow-jet mixer to satisfy

different economic and time parameters and different types of fertilizer or nutrient coatings.

Claims 5, 8, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,250,660 to Kitamura et al in view of U.S. Patent No. 2,815,376 to Knowlton et al and Frigmaires Engineers Inc. Internet Products Home Page.

Regarding Claims 5, 8, and 12, Kitamura is silent on the paddle mixer, the powder, and the ribbon mixer apparatus. However, Knowlton et al teaches that paddle mixers and ribbon mixers are well known agitation coating mixing apparatuses, but is silent on the powder mixer. Frigmaires Engineers Inc. discloses that powder mixers and ribbon mixers are equivalent mixers. Therefore, it would have been obvious to one of ordinary skill in the art to modify the coating method of Katamuri with the mixers of Knowlton et al and Frigmaires, since the applicant does not indicate the criticality of one type of mixer over the other in the specification and these mixers are alternate equivalent methods that perform the same intended function. These mixers are well known in the art and one skilled in the art would select a paddle, a powder, or a ribbon mixer to satisfy different economic and time parameters and different powder applications.

Claims 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,250,660 to Kitamura et al in view of Mars Mineral Internet Products Home Page.

Regarding Claims 13 and 15, Kitamura is silent on a pin mixer or pin type mixer. However, Mars Mineral discloses a pin mixer that is well known in the art for agglomeration applications. It would have been obvious to one of ordinary skill to modify Kitamura's agglomeration method with the Mars Mineral apparatus since the applicant does not present a criticality for a particular device in the specification and the pin/pin type-mixer is an alternate equivalent agglomeration apparatus that performs the same intended function. These mixers are well known in the art and one skilled in the art would select a pin/ pin-type mixer to satisfy different economic and time parameters and different powder applications.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,250,660 to Kitamura et al in view of U.S. Patent No. 6,202,346 B1 to Lyons et al.

Regarding Claim 7, Kitamura is silent on a horizontal pan. However, Lyons et al discloses a seed coating method and that the industry standard for coating are pan-type arrangements including the horizontal pan (Lyons et al Col. 1 lines 35-42). It would have been obvious to one of ordinary skill in the art to modify the seed coating method of Kitamura with the apparatus disclosed by Lyons et al since the applicant does not present a criticality for a particular device in the specification and the horizontal pan is an alternate equivalent agglomeration apparatus that performs the same intended coating function. The horizontal pan is well known in the art and one skilled in the art

would select the horizontal pan to satisfy different economic and time parameters and for different powder applications.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,250,660 to Kitamura et al in view of U.S. Patent No. 5,130,171 to Prud'Homme et al.

Regarding Claim 10, Kitamura is silent on a planetary mixer. However, Prud'Homme et al discloses a planetary mixer used in a seed encapsulating method (Prud'Homme et al. Col. 8 line 12-13). It would have been obvious to one of ordinary skill in the art to modify the coating method of Kitamura with the apparatus of Prud'Homme et al, since the applicant does not present a criticality for a particular device in the specification and the planetary mixer is an alternate equivalent apparatus that performs the same intended function in the coating process. The planetary mixer is well known in the art and one skilled in the art would select the mixer to satisfy different economic and time parameters and for use in two coating operations.

Claims 11, 14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,250,660 to Kitamura et al in view of U.S. Patent No. 5,891,246 to Virgil D. Lund.

Regarding Claims 11, 14, and 16, Kitamura is silent on a cone mixer, a vertical mixer, or a cone pelletizer. However, Lund discloses a seed coating apparatus that uses a cone mixer (Lund Col. 2 line 21, Col. 3 line 17, and Fig. 1). The applicant does

not define a cone pelletizer and a vertical mixer, Lund's apparatus also discloses a vertical mixer since the coating apparatus of Fig. 1 has a vertical orientation and it discloses a cone pelletizer since it performs the step of pelletizing and has a cone shape configuration. It would have been obvious to one of ordinary skill in the art to modify the method of Kitamura with the apparatus of Lund, since the applicant does not present a criticality for a particular device in the specification and these are alternate equivalent apparatuses that perform the same intended function. These agglomeration apparatuses are well known in the art and one skilled in the art would select a vertical mixer or a cone pelletizer/mixer to satisfy different economic and time parameters and for different types of fertilizer or nutrient coatings.

Claims 4, 5, and 7-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,465,017 to Simmons.

Regarding Claims 4, 5, and 7-17, Simmons is silent on the various apparatuses listed in claims 4, 5, and 7-17. However, these apparatuses are old and well-known seed coating or mixing machines. It would have been obvious to one of ordinary skill in the art to modify the teachings of Simmons with any of the machines listed in claims 4, 5, and 7-17 since these are merely alternate equivalent agglomeration machines that perform the same intended function of agglomerating particles with a coating and one would select a particular agglomeration machine to satisfy different economic and time parameters and to accommodate different types of fertilizer or nutrient coatings.

***Response to Arguments***

Applicant's arguments filed 11 September 2001 have been fully considered but they are not persuasive.

Kitamura teaches the method of coating seeds using a surface treated coating powder that was treated by a water-soluble binder (Col. 1 line 31-33) and that the surface treated coating powder is bonded to the seed with additional water-soluble binder (Col. 1 line 36-39) thus becoming an integral part of the seed. Kitamura teaches that growth hormone compounds and fungicides (Col. 1 line 57-59) can be added to the coating thus improving germination and establishment performance. Furthermore, Kitamura is not classified by the U.S. Patent Office in a class for applying coatings to food stuff, but is classified in class 47, plant husbandry, subclass 57.6, coated or impregnated seed, method or apparatus.

Examiner maintains that Kitamura discloses an agitation agglomeration process as claimed. Webster's dictionary defines agitate as 'to give motion to' and 'to move with an irregular, rapid, or violent action' and defines agglomeration as 'the action or process of collecting mass.' Kitamura's process of coating seeds with a coating powder (Col. 2 line 13) is inherently an agitation agglomeration process utilizing a **centrifugal** fluidized or fluidized bed coating machine **and the like** (Col. 2 line 16). For instance, Kitamura's example #1 teaches that in step (1) the surface-treated coating powder is created. Then in step (2) the seeds are **tumbled** and sprayed with the binding agent and the coating then adheres to the surface of the seed encapsulating the seed.

In addition, examiner maintains that Ritzer discloses old and well-known equipment for an agglomeration method of agitating and tumbling including an inclined pan or disk, i.e. a rotary-drum agglomerator, a paddle mixer, i.e. plug mixer, or a flow mixer. These apparatuses are merely obvious alternate equivalent means for applying the surface treated powder coating of Kitamura since they perform the same intended function of agglomerating, adding mass, to the surface of a substance, in this case a seed.

Applicant does not claim nor describe in the specification the method step of pre-selecting the core seed.

Examiner maintains that Knowlton and Frigmaries teach alternate equivalent mixing machines, and these are old and well-known machines for mixing and it would have been obvious to one of ordinary skill in the art to modify Kitamura with the mixers of Knowlton and Frigmaries. Knowlton teaches that the paddle and ribbon mixer are used as an agitation means to coat granules with a solution of urea (Knowlton Col. 4 lines 15-20).

Examiner maintains that the MARS pin mixer is a machine utilized for agitating and tumbling particles for agglomeration and the machine specs indicate that the pin mixer is a processor designed for mixing or for micro-pelletizing. Therefore, it would have been an obvious alternate equivalent machine to one of ordinary skill in the art.

Examiner maintains that the pan-type mixer of Lyons et al is an alternate equivalent apparatus to that taught by Kitamura. Lyons et al teaches that the pan-type mixer is used to apply a particulate coating to a seed and that the pan-type mixers are

well known apparatuses in the field of seed coatings (Lyons et al Col. 1 line 41-42). It would have been obvious to one of ordinary skill in the art to look to a pan-type mixer for modification of Kitamura.

Examiner maintains that Prud'Homme et al teaches a planetary mixer for encapsulating particles. Although, Prud'Homme is silent on seeds in particular, it would have been obvious to one of ordinary skill in the art to look to the apparatus of Prud'Homme for modification of Kitamura since it performs the same intended function of adding mass to a substance particle.

Examiner maintains that Lund's disclosure of a cone mixer, vertical mixer, or cone pelletizer teaches that these machines are old and well-known seed coating apparatuses and it would have been obvious to one of ordinary skill in the art to look to the teachings of Lund to modify Kitamura since they are alternate equivalents that perform the same intended function of agglomerating a seed.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrea M. Valenti whose telephone number is 703-305-3010. The examiner can normally be reached on 7:30am-5pm M-F; Alternating Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M. Poon can be reached on 703-308-2574. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-4195 for regular communications and 703-305-0285 for After Final communications.

Art Unit: 3643

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-4357.

AMV  
October 14, 2001

  
PETER M. POON  
SUPERVISORY PATENT EXAMINER  
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